World Military Expenditures and Arms Transfers, 2014 edition

Introduction

This edition of World Military Expenditures and Arms Transfers (WMEAT), *WMEAT 2014*, prepared in 2014, covers the eleven-year period from 2001 through 2011, the most recent year for which final data for many parameters were available in 2014. It responds to a statutory requirement that the U.S. Department of State annually publish detailed, comprehensive and statistical information and in-depth analyses regarding military expenditures, arms transfers, armed forces, and related economic data for each country of the world. Comments, including suggestions for improvement of WMEAT and identifications of apparent errors, may be addressed to WMEATeditor@state.gov.

This edition of WMEAT is published electronically, on the website of the U.S. Department of State, in the form of four distinct downloadable documents:

- this "Introduction and Overview" section, in a PDF document;
- Table I, the military expenditures and armed forces personnel table, in an Excel spreadsheet workbook containing eight "world pages" (pages of global scope) and 170 country pages;
- Tables II - IV, the arms transfer deliveries tables, in an Excel spreadsheet workbook containing thirteen "world pages" (no country pages); and
- a "Sources, Data and Methods" section, in a PDF document.

The Tables make up the body of this report. They offer much information not described in the "Overview." The "Sources, data and methods" section is indispensible for understanding the methodological basis for data in the tables, especially with respect to substantial and pervasive uncertainties and sources of error.

Table I presents annual and eleven-year-mean information about number of armed forces personnel, population, labor force, military expenditures, gross domestic product (GDP), and ratios of these parameters, for individual countries, for geographic, economic and political groups of countries, and for the world. It also presents annual and eleven-year-mean Freedom House "political rights" scores and World Bank Institute "voice and accountability in governance" scores for individual countries.

Table II presents annual and eleven-year-mean information about the value of exports and imports both of arms and of all goods and services, and ratios of these parameters, for individual countries, for geographic, economic and political groups of countries, and for the world.

Table III presents a matrix of world arms transfer values by major supplier and country of destination for the three-year period from 2009 through 2011.

Table IV presents annual and eleven-year-mean information about the value of arms exports of major suppliers to individual countries, geographic, economic and political groups of countries, and the world.

The "Group rankings and trends" and "Country rankings and trends" pages of both the military expenditures workbook and the arms transfers tables workbook offer rankings of both of countries and of economic (GDP-per-capita) and political (degree-of-democracy) groupings of countries, by every demographic, economic and political parameter used in preparing this report, and also by slope of trendline over time for military parameters.

New in this edition of WMEAT are a number of features, described at the start of the "Sources, data and methods" section, salient among which are the following:

- The country pages in Table I offer current and constant national currency values for military expenditure and GDP, and the market exchange rates and purchasing power parity rates used in converting them to US dollars. Previous editions of WMEAT presented military expenditure and GDP values only in US dollar terms.
- In Table I, greater use is made of country-specific notes on country pages (row 6) to describe country-specific data problems and methods, and to explicate scope of coverage of armed forces personnel and military expenditure figures.
- In Table I, population figures are once again, as in *WMEAT 2005* and previous editions of WMEAT, sourced chiefly from the International Database (IDB) of the U.S. Census Bureau.

Military expenditure and GDP values and ratios involving them may vary greatly depending on currency conversion method used, and no single currency conversion method seems best for all analytic purposes. The "Overview" page of Table I indicates the range of variation across conversion methods of military spending both in absolute terms and relative to GDP, for all countries and groups of countries, for both the latest year covered and for the eleven-year period average. The conversion methods used, and the advantages and disadvantages of each, are described in the "Sources, data and methods" section.

Overview

WMEAT figures, especially for armed forces personnel, military expenditures and arms transfers, are neither so accurate nor so reliable as uniform presentation in statistical tables might seem to imply, due to incompleteness, ambiguity, or total absence of data for some countries either in those parameters or in parameters, such as GDP price deflators or exchange rates, used in Table I to convert local-currency-denominated values for military spending and GDP to U.S. dollars. In Table I, apparent sources of error and extent of imprecision vary across countries, years, and parameters, and are indicated by color-coding on the pages for specific countries. In Tables II, III and IV, the quality of source data for arms transfer values is not readily assessable. In no table does either rounding or limitation on significant digits adequately reflect potential inaccuracy.

Military expenditures

From 2001 through 2011, in constant 2011 U.S. dollar terms, the annual value of world military expenditures appears – despite declining slightly in 2011 – to have risen about 43-49%, from about $1.18-1.40 trillion in 2001 to about $1.80-2.09 trillion in 2011, and to have averaged between $1.41 and $1.80 trillion for the 11-year period. The range of values results from using diverse methods to convert non-U.S. military expenditures to U.S. dollars. Using a current-year-average market exchange rate (MER) for each country yields the lowest value for global military expenditures; using the purchasing power parity rate for each foreign country's whole economy (PPP-for-GDP) yields the highest value.

Military burden (ratio of military expenditures to GDP)

During the eleven-year period, for the world the share of GDP to which military expenditure was equivalent – an indicator sometimes called "the military burden" – appears to have averaged between 2.3% and 2.7%, peaking at between 2.5% and 2.9% in 2009. Converting non-U.S. military expenditures and GDPs to U.S. dollars using a real MER yields the greatest military burden; converting non-U.S. GDPs at PPP-for-GDP while converting non-U.S. military expenditures at a notionally estimated defense-sector-specific PPP rate yields the least military burden.

Throughout the period, military spending accounted for a far lower share of measured global economic output than in 1989, at the end of the Cold War, when it appears to have been about 4.7% at a real MER.

Armed forces

The number of people serving in the world's armed forces appears to have fallen from 22.4 million in 2001 to 20.9 million in 2011, a drop of about 7% in absolute terms. It appears to have fallen about 17% in per capita terms, from about 0.36% to about 0.30% of total population. It appears to have fallen by about 16% as a proportion of the labor force, from about 0.79% to about 0.65%. Armed forces personnel as a share of the labor force appears to have trended downward over the period in every region save South America and South Asia, and for every economic and political group of countries covered in the report, *i.e.*, for every quintile of world population ranked either by GDP per capita or by NGO-assessed degree of democracy. However, the decline in world armed forces personnel appears to have stopped in absolute terms, and slowed relative to either population or labor force, after 2005.

From 2001 through 2011, world military expenditures per armed forces member – an indicator of the capital-intensivity of the military – appear to have risen by 52-59% despite declining in 2011. As above, the range results from using different methods of converting non-U.S. military expenditures to U.S. dollars. Military spending per armed forces member appears to have risen in every region and for every economic and political group of countries.

The world ratio of military spending per armed forces member to GDP per labor force member – an indicator of the capital-intensivity of the military relative to that of the economy as a whole – appears to have averaged about 3.8, trending upward for the eleven-year period despite declining after 2009.

Arms transfers

From 2001 to 2011, in constant 2011 U.S. dollar terms, the global annual value of international arms transfer deliveries appears to have risen by about 95%, from about $91 billion to about $178 billion, while averaging about $120 billion. The arms trade's share of world trade in goods and services appears to have ranged from about 0.6% to about 1.0%, with no clear trend.

During the period, more than 77% of the world arms trade, by value, appears to have been supplied by the United States, about 11% by the European Union, about 5% by Russia, less than 2% by China. The U.S. share of the world arms market appears to have grown, while the E.U. share appears to have diminished.

Countries in the richest quintile of world population appear to have accounted for about 97% of world arms exports and about 72-73% of world arms imports, regardless of whether quintiles are based on national GDP per capita at a real market exchange rate or at purchasing

power parity. By either standard, the richest quintile was the only GDP-per-capita quintile with a positive arms trade balance.

Countries in the most democratic quintile of world population appear to have accounted for 92% of world arms exports and about 59% of world arms imports. The most democratic quintile was the only degree-of-democracy quintile with a positive arms trade balance.

In constant 2011 U.S. dollar terms, U.S. arms exports appear to have averaged about $93 billion a year, while U.S. arms imports appear to have averaged less than $4 billion a year. Over the period, the world arms trade surplus of the U.S. appears to have been equivalent to about 14% of its total trade deficit.

At least 76% to 78% of U.S. arms exports appears to have been delivered to countries in the richest quintile of world population, which appear to have sourced at least 82% of their arms imports from the U.S. At least 65% of U.S. arms exports appears to have been delivered to countries in the most democratic quintile of world population, which appear to have sourced at least 86% of their arms imports from the U.S. A growing proportion of U.S. arms exports, averaging about 9% for the period, went to multinational entities or entities not specified by the governmental exporting or export licensing authority.

Both the growth in the world arms trade and the increase in the U.S. share of world arms exports during the period appear to be due largely to increasing reliance on the U.S. as a source of arms by other rich, democratically-governed countries.

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